



WORLD SHIPPING COUNCIL
PARTNERS IN TRADE

The Climate Agenda: What Can We Expect?

Bryan Wood-Thomas
World Shipping Council

AAPA Seminar
12 November 2008



Overview

- **MARPOL Annex VI**
 - New Standards
 - Emission Control Areas
- **Climate**
 - What is the nature of the debate?
- **Negotiations at the IMO and the UNFCCC**
- **Actions in the US & elsewhere**
- **The Port as Interface**



MARPOL Annex VI

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 - International Convention for the Prevention of Pollution from Ships
- **6 Annexes to Treaty**
- **Annex VI: Air Emissions from Ships**
 - Regulates NO_x, SO_x, PM, and other pollutants
 - Adopted in 1997
 - Entered into force 2005
 - New standards adopted last month
 - Standards effective in July 2010 and later

New International Standards

New Standards will result in large reductions

New engines

Tier 2: 20% reduction from
Tier 1 in 2012

Tier 3: 80% reduction from
Tier 1 in 2016

Geographic standard –
applies in Emission
Control Areas (ECAs)

Fuel Sulfur Limits (to address SO_x and PM)

July 2010: 1% in ECAs

2012: Global cap falls to 3.5%

2015: ECA cap falls to .1%

2020: Global cap falls to .5%

- subject to review in 2018



Effects of the New Standards

- They will be significant, but uniform across competitors.
- New engine technologies may drive a departure from the usual trade-off between NOx and CO2.
- Requirements to burn cleaner distillate fuel will lead to significant costs when compared to residual fuel bills, but cost per good and CO2 per TEU or ton mile will remain very low

Where Can We expect New Emission Control Areas?

- **North America: West, Gulf, and East Coasts as well as the St. Lawrence / Great Lakes.**
 - How soon? - 2012
 - California requirements: 2009 / 2012
- **Other Candidates:**
 - **Mediterranean**
 - **Tokyo Bay**
 - **Hong Kong**

Climate: How has the debate changed?

- Debate about the science has narrowed dramatically
- The physical evidence is growing each year
- The debate has shifted to what will be done and through what approach
 - Critical to these questions are what scale will the approach be undertaken and will international solutions prove acceptable
 - Shipping is the most CO₂ efficient transport mode: Will it be part of the regulated community?

The GHG Debate

- Ships account for about 2-3.5% of GHG
- Most energy efficient mode of transport
- Development of a legally binding IMO treaty is under debate
- What system is to be employed?
 - Fuel tax
 - Mandatory efficiency standards
 - Trading scheme
 - Cargo-based scheme with assignment to national inventories



UNFCCC

Actions in the EU, US, ...

EU is considering inclusion of ships /ports into ETS.

US likely to act, but scale of action remains to be determined.

- **economy-wide**
- **new legislation**
- **sector specific**

Australia & New Zealand considering ETS for ships .

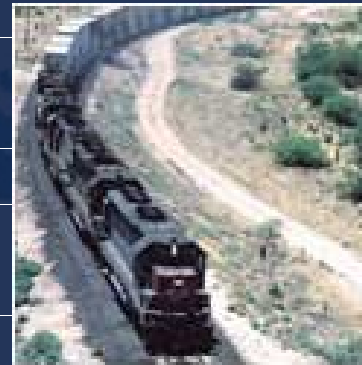


CO2 Generation in the Global Supply Chain

-Marine transportation accounts for some 2-4% of total anthropogenic CO2 emissions worldwide.

- Generation in the transoceanic leg is tremendously low when compared to rail and truck

-What does this suggest about future trends in a changing economy?



CO2: Where are the Reductions?

Long-term:

- Vessel design improvements
- Power plant

Fleet Demographics:

- Today's fleet age
- Low turnover ahead

What can be achieved in the near-term?

- Prop improvements
- Fin retrofits
- Speed



Where do Ports Stand in this Issue?

- **Intersection of marine, rail, and truck traffic**
 - all 3 transportation legs likely to be regulated
 - many reduction strategies will look at increased inter-modal efficiency and ports will be the center stage.
- **Many ports may be subject to more severe and frequent storm events**
 - infrastructure improvements should consider storm mitigation structures
 - enhanced recovery planning

Summary

- The world fleet is now very young and turnover will slow markedly.
- Fuel costs will rise both as a result of the market and regulation.
- Ports will be at the center of efforts to improve efficiency and reduce emissions.
- Many ports can anticipate more frequent and severe damages resulting from severe weather
- Market conditions have presented obstacles to innovation. The policies we shape need to foster & reward the innovation that is critical.



Questions



Bryan Wood-Thomas, Vice-President
World Shipping Council

bwoodthomas@worldshipping.org